CoMic™

A game-changing service to help achieve optimal usage of corrosion inhibitor

Why CoMic™?

- New and complementary information
- Designed for in field applications
- Accurate non-intrusive measurement of CMC
- Analysis, Optimisation, Assurance
- Saving through chemical efficiency
- Enhanced asset integrity
- Robust corrosion management
- Independent Assurance, Delivered

Testimonials

"Statoil has tested CoMic™ in our corrosion lab in Porsgrunn to evaluate if the technology could be used in our fields. Four different corrosion inhibitors were analysed by CoMic™ to find the CMC for each inhibitor. Residual corrosion inhibitor concentration was used to find the actual corrosion inhibitor concentration at CMC. In parallel, corrosion tests were carried out to find the optimum inhibitor concentration for corrosion protection. The CoMic™ analysis and the corrosion tests gave the same optimal inhibitor concentration for each of the inhibitors even if the concentration was different for the different products (30, 30, 50 and 120 ppm).

Based on these results CoMic™ is evaluated as a good tool for optimization of corrosion inhibitor concentration in the field and is recommended to be used in several of our fields."

Statoil, Norway

"I was intrigued by the CoMic™ concept. LUX have been extremely professional in their contact with me and I have been impressed by the quality and timeliness of their work."

Colin Strachan, Snr Production Chemist
Major Operator, North Sea

CoMic™ compared to standard corrosion management tools

	CoMic™	Simple residual analyses e.g. methyl orange	Complex residual analyses e.g. LC-MS	Corrosion rate testing e.g. coupons, probes
Suitable for field use?	✓	✓	✗	✓ (not all)
Reliable and accurate?	✓	✗	✓	✓ (not all)
Robust to interferences (e.g. oil, scale inhibitors)?	✓	✗	✗	✗ (not all)
Indicates if dosage is optimal?	✓	✗	✗	✓
Indicates overdosing?	✓	✗	✗ / ✓	✗
Provides concentration info?	✗	✓	✓	✗

Optimum dosage

Chemical corrosion inhibitors are routinely used to protect process equipment and pipeline infrastructure. It's difficult to establish optimum dosage levels, as conditions change so rapidly in the field. While under-dosing can increase the risk of corrosion, adding more inhibitor is not always a solution. That's because surplus chemicals may offer no additional protection, and can cause emulsion build-up and complex separation issues which are time-consuming and expensive to resolve.

The answer

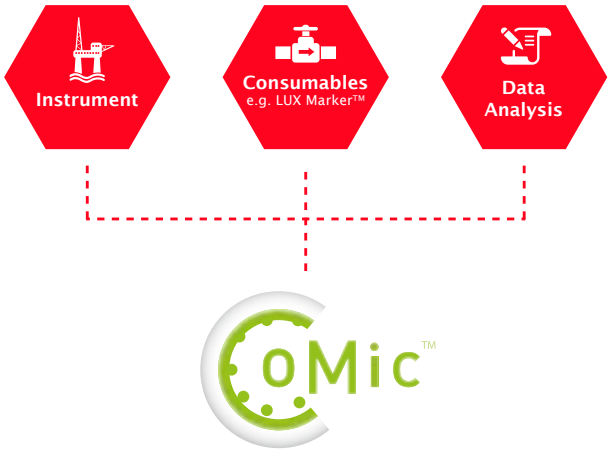
CoMic™ (patent pending) is revolutionary technology which provides information on optimal dosage of corrosion inhibitors. It's a combined technology and service covering consumable markers, our customised equipment, and critical data analysis. It provides significantly increased risk assurance in relation to internal corrosion, premature loss of containment and life extension. In our opinion, you can't afford to be without it.

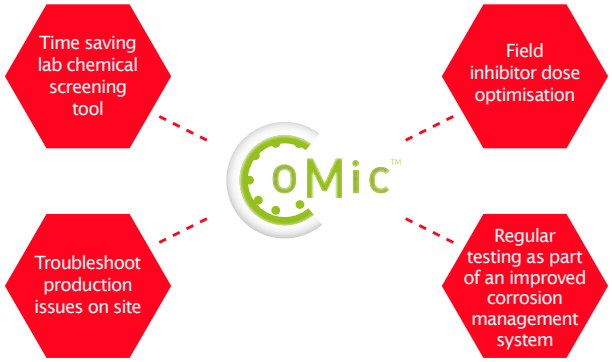
How it works – meet the micelle

A micelle is a microscopic cluster of corrosion inhibitor floating around in fluid. It forms when every surface in the pipe structure has been coated, and the chemicals start to group together. The ideal functional dose of corrosion inhibitors is the point where micelles begin to form in a system, but before there are too many – this is the Critical Micelle Concentration or CMC. CoMic™ is the only readily available technology for accurately measuring CMC in the field.

How it's used

CoMic™ is used onsite, avoiding sample degradation caused in transit. The process is simple – a sample is mixed with a marker and analysed with our proprietary instrument. LUX Assure personnel further perform the analysis, providing a detailed service report highlighting key recommendations leading to informed management decisions.





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